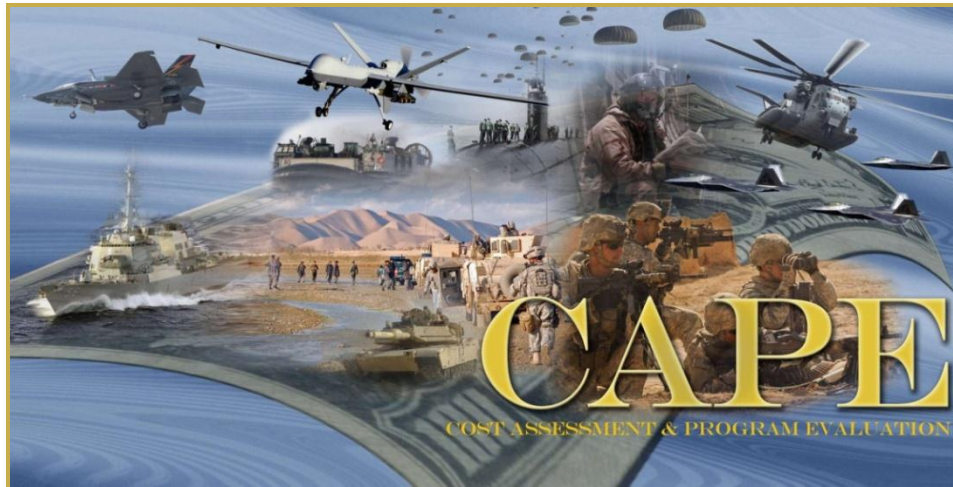


# XML Overview and Conversion Instructions



July 1, 2014



# XML Overview

OSD CAPE

- The following slides provide an overview of the transition to XML and step-by-step instructions to illustrate how files can be converted to XML:
  - Overview of the XML Requirement
  - DCARC-Approved XML Schemas
  - cPet Desktop Conversion
  - cPet Web Conversion



# What is XML?

OSD CAPE

- A language used between IT/data systems
  - Not for humans
  - Open data tagging standard/syntax for data exchange
  - Like HTML (tagging standard for content in Web browser)
- Key XML Components
  - XML schema: Agreed to “grammar” of language
  - XML file: data package encoded to a schema
  - Secure data transmission method
  - Tools (e.g., a writer and a reader)



# Why Use XML?

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- Improve efficiency and reliability of data exchange
  - Old School
    - Send: Extract, prepare, print, snail-mail or fax
    - Receive: manual check and retype
  - Not So Old School
    - Send: Extract, prepare Excel/PDF, digital sign, secure transfer
    - Receive: semi-automated check, reformat, OCR
  - New School
    - Send: Extract, prepare XML, digital sign, secure transfer
    - Receive: automated check, import to database, review / analyze



# DCARC XML Requirement

OSD CAPE

COST ASSESSMENT AND  
PROGRAM EVALUATION

OFFICE OF THE SECRETARY OF DEFENSE  
1800 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-1800

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: Contractor Cost Data Reports (CCDRs) XML file Required on Future Submissions

The Defense Cost and Resource Center (DCARC) is migrating CCDR submissions from Microsoft Excel files to Extensible Markup Language (XML) files to facilitate storage of CCDR data in a structure that will streamline government CCDR data exploitation. XML data submission will reduce inefficiencies associated with redundant government efforts of manually extracting CCDR data out of Microsoft Excel files. In addition, this will reduce the amount of time required by industry to participate in the CCDR submission and validation process.

Effective July 1, 2014, all contractors, direct reporting subcontractors, and other entities reporting under the May 2011 Data Item Descriptions (DI-FNCL-81565C, DI-FNCL-81566C, DI-FNCL-81567C), are required to submit CCDRs as stand-alone Excel-compatible files and as DCARC approved Extensible Markup Language (XML) files to the DCARC's secure Web site using the CSDR Submit-Review System. The DIDs already require the two formats. The DCARC is now enforcing the requirement for the XML file. The XML files can be generated automatically from the Excel-compatible files (or vice versa) with DCARC's cPet software tool. All validations starting July 1, 2014 will be conducted on the XML files. The validations will cover both content and format.

The DCARC provides cPet to organizations participating in the CCDR submission and validation process. This application, along with CCDR XML schemas, are available for download from the DCARC's website. DCARC office staff will answer questions and train your organization on how to use cPet to convert CCDR Microsoft Excel files to DCARC approved XML files (or vice versa) as requested.

To facilitate the DCARC migration to XML data submission, organizations submitting under prior versions of the May 2011 DIDs are asked to comply with this memorandum and submit CCDR XML files. The cPet application is able to handle CCDR forms dating back to 2007 DID versions. Supporting XML schemas dating back to 2007 are also available for download on the DCARC Web site.

- Using Existing CCDR Schemas from cPet
  - Continue submitting “formatted” CCDRs in Excel as supplemental files
  - Continue submitting to the CSDR Submit-Review website





# DCARC-Approved Schemas

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## Defense Cost and Resource Center

### Enhancing DoD Cost Analysis



Home

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Training &amp; Events

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#### DCARC Portal

##### Portal Login

Access to DACIMS, CSDR-SR,  
cPetWeb, 1921-3 & FPR

[Request Portal Access](#)

[Registration Instructions](#)

##### eRoom Login

Access to Plan Development  
Forum

[Request eRoom Access](#)

#### CSDR Overview and Policy

#### Plan Development and Contracting

### cPet CSDR Planning & Execution Tool

**NEW Release!**  
**version 2.4**

- Updated RDT Features
- New Validation Rules for Cost Reports
- Generate CWBS Dictionary Feature
- Create Flat File Template from Contract Plan Feature



### CSDR Planning & Execution Tool

The DCARC's new CSDR Planning & Execution Tool (cPet) software provides automated 1921 and 1921-1 cost report validation as well as assisted CSDR plan creation. You can download this standalone Windows desktop application by pressing the Download cPet button.

Some of the features of cPet include:

- Creation of new program/contract plans using the cPet WBS editor
- Automated conversion of plans from the 2003 or 2007 DD 2794 to the 2011 DD 2794
- Creation of Resource Distribution Tables (RDTs)
- Validation of 1921 and 1921-1 cost reports (requires a copy of CSDR plan in either .xls or .xml format)
- Side-by-side comparison of 1921 or 1921-1 reports across two reporting periods

The major functions of the application are summarized in the following table:

	Program Plan	Contract Plan	1921	1921-1	1921-2	1921-3
Creation of new documents	x	x	x	x		

cPet v2.4

[Download cPet](#)

#### cPet Flat File Feature

cPet provides the ability to import from and export into an Excel flat file. See below for the flat file format and more information.

[cPet Flat File Format](#)

[cPet Import/Export Overview](#)

Please provide feedback or report errors by clicking here:

[Feedback/Error Report](#)

For further assistance, please consult the User Manual in the link below. Or you can contact cPet Support at:

[dcarcsupport@tecotate.com](mailto:dcarcsupport@tecotate.com)

#### Supplemental Documents/Files

[Demo Files](#)

[User Manual](#)

[Installation Instructions](#)

[What's New](#)

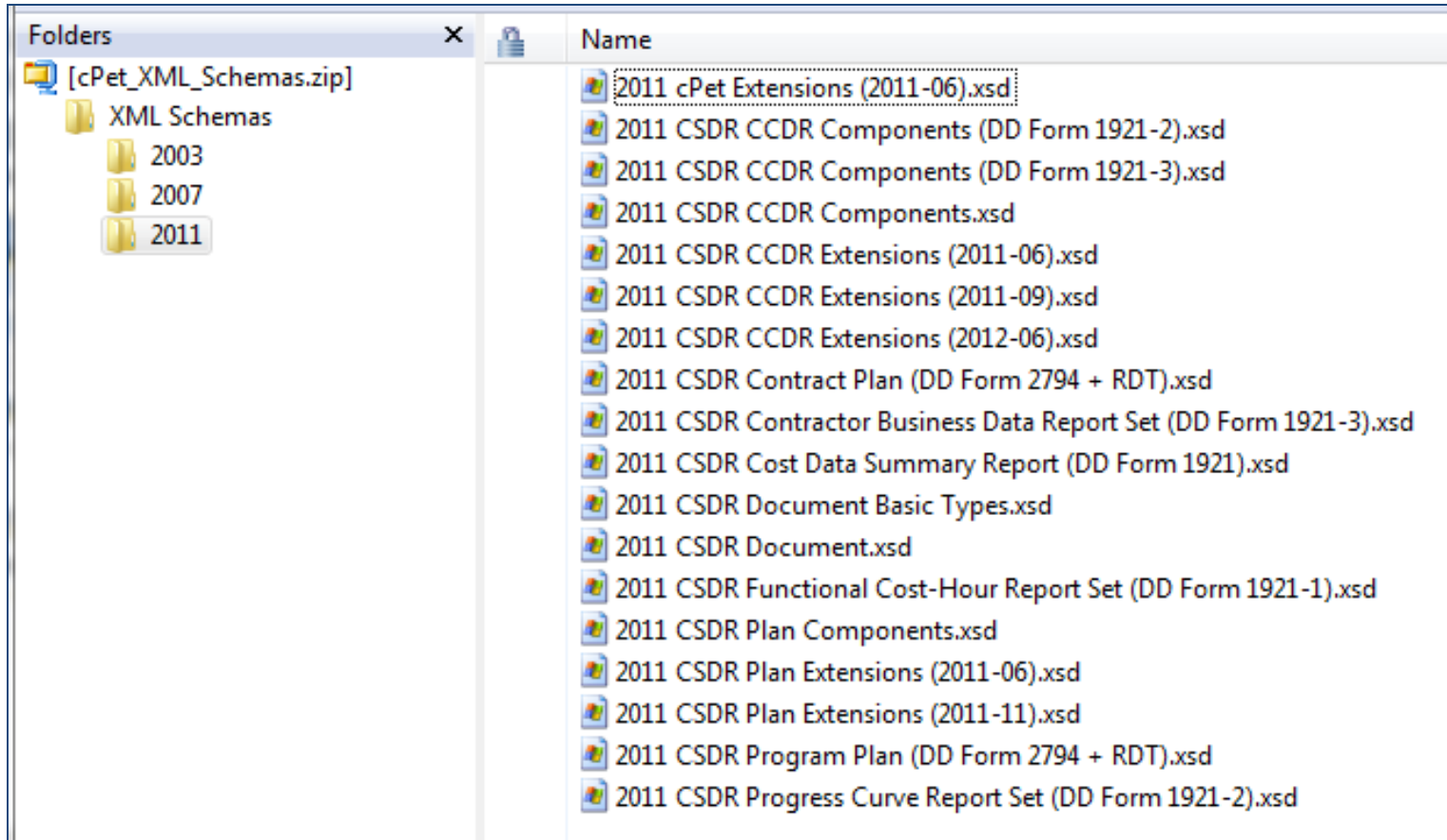
[XML Schemas](#)

- Available on the DCARC public site with cPet



# Current Schemas

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- Current family of schema CCDR files



# Implementation

OSD CAPE

- Contractors who have the requirement to submit DD Forms 1921, 1921-1, and 1921-2 reports have the following options:
  - Write their own software to format XML files according to the published, DCARC-approved XML schemas
  - Use cPet Desktop to help generate DCARC-approved XML files from Excel files
  - Use cPet Web to help generate DCARC-approved XML files from Excel files





# cPet Overview

OSD CAPE

- Key cPet Functions
  - Build & Edit CSDR Plans and RDT
  - Build, Edit, & Pre-validate CCDR Formats
  - Import and create Excel CCDR forms/templates
  - Import CCDR data from Excel “flat file”
- cPet native file format is XML!



# You're Already Doing It

OSD CAPE

COST DATA SUMMARY REPORT										Form Approved OMB No. 0704-0087	
The public reporting burden for this collection of information is estimated to average 9 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.											
<b>PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION</b>											
1. PROGRAM a. M&AP: cPet Demonstration Space System (CDSS) b. PHASE: Development		2. PRIME MISSION PRODUCT Demo PMP		3. CONTRACTOR TYPE (X one) <input checked="" type="checkbox"/> PRIME/ASSOCIATE <input type="checkbox"/> DIRECT-REPORTING SUBCONTRACTOR		4. NAME/ADDRESS (Include ZIP Code) Demo Corporation, 456 Test Blvd, New York, NY 55555		5. APPROVED PLAN NUMBER X-08-Y-C1			
6. CUSTOMER (DIRECT-REPORTING SUBCONTRACTOR USE ONLY)		7. CONTRACT FFP		8. CONTRACT PRICE \$3,219,200.0		9. CONTRACT N/A		10. TYPE ACTION a. CONTRACT NO.: A99XYZ-08-B-1234 b. LATEST MODIFICATION: c. SOLICITATION NO.: d. NAME: Demo			
11. PERIOD OF PERFORMANCE a. START DATE (YYYYMMDD): 20080513 b. END DATE (YYYYMMDD): 20100131		12. APPROPRIATION <input checked="" type="checkbox"/> RDT&E <input type="checkbox"/> PROCUREMENT <input type="checkbox"/> O&M		13. REPORT CYCLE <input checked="" type="checkbox"/> INITIAL <input type="checkbox"/> INTERIM <input type="checkbox"/> FINAL		14. SUBMISSION NUMBER 1		15. RESUBMISSION NUMBER 0		16. REPORT AS OF (YYYYMMDD) 20081031	
17. NAME (Last, First, Middle Initial) Tester, Fred A		18. DEPARTMENT Business Operations		19. TELEPHONE NUMBER (Include Area Code) 555-555-5555		20. EMAIL ADDRESS f.tester@demo.com		21. DATE PREPARED (YYYYMMDD) 20081201			
VBS ELEMENT CODE A		VBS REPORTING ELEMENTS B		NUMBER OF UNITS C		COSTS INCURRED TO DATE D		NUMBER OF UNITS AT COMPLETION E		COSTS INCURRED AT COMPLETION F	
						NONRECURRING G				NONRECURRING H	
						RECURRING I				RECURRING J	
						TOTAL K				TOTAL L	
10	Space System		\$419,000.0		\$49,200.0		\$468,200.0	1		\$2,819,000.0	\$140,700.0
11	SEI/PM and Other Common Elements		\$25,000.0		\$25,000.0		\$50,000.0	1		\$125,000.0	\$29,000.0
12	Space Vehicle (L-n as required)		\$229,000.0		\$19,200.0		\$242,200.0	1		\$1,329,000.0	\$57,000.0
12.1	SEI/PM and Other Common Elements		\$24,000.0		\$5,000.0		\$29,000.0	1		\$124,000.0	\$9,000.0
12.2	Spacecraft Bus		\$22,000.0		\$2,500.0		\$24,500.0	1		\$222,000.0	\$10,000.0
12.2.1	Integration, Assembly, Test and Checkout		\$12,000.0		\$2,000.0		\$14,000.0	1		\$112,000.0	\$6,000.0
12.2.2	Telemetry, Tracking, and Command Subsystem		\$10,000.0		\$500.0		\$10,500.0	1		\$110,000.0	\$4,000.0
12.3	Communication Payload		\$24,000.0		\$0.0		\$24,000.0	1		\$424,000.0	\$16,000.0

welcome to

# cPet

## Suggestions for getting started:

- Import an Excel-based CSDR Plan by selecting File→Import
  - Create a new CSDR Plan by selecting File→New
  - Open an existing cPet document by selecting File→Open
- Drag and drop cPet files from Windows Explorer into this window
  - Select Help to access the built-in Help System

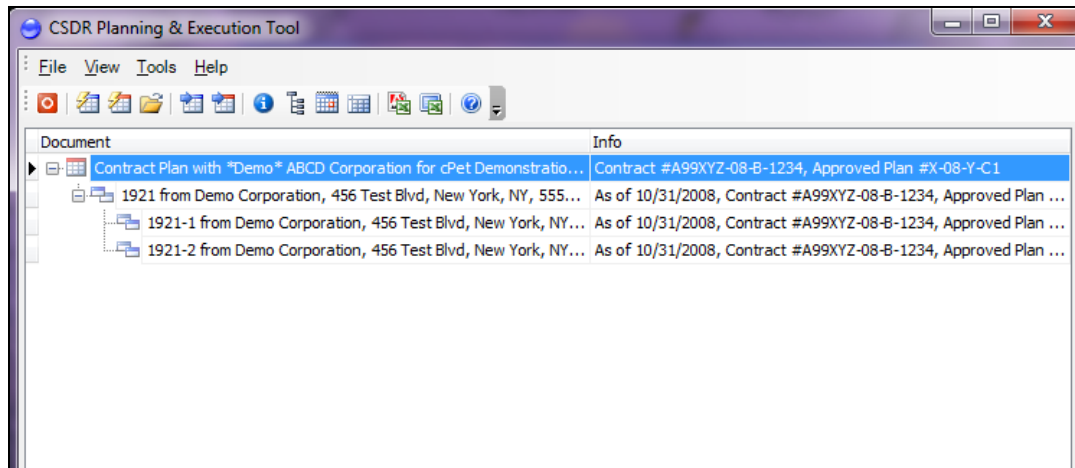
```
<?xml version="1.0" encoding="utf-8"?>
<Form1921 xmlns="urn:Teconote:DCARC:CCDRForms2007" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <programName>cPet Demonstration Space System (CDSS)</programName>
  <programPhase>Development</programPhase>
  <primeMissionProduct>Demo PMP</primeMissionProduct>
  <contractorType>Prime or Associate</contractorType>
  <contractorNameAddress>
    <contractorName>Demo Corporation, 456 Test Blvd, New York, NY,
    <address>
      <address1></address1>
      <address2></address2>
      <city></city>
      <state></state>
      <zipCode></zipCode>
      <isInternational>false</isInternational>
    </address>
  </contractorNameAddress>
  <approvedPlanNumber>X-08-Y-C1</approvedPlanNumber>
  <customerName></customerName>
  <contractType></contractType>
  <contractPrice>3219200</contractPrice>
  <contractCeiling>N/A</contractCeiling>
  <typeAction>
    <contractNumber>A99XYZ-08-B-1234</contractNumber>
    <latestModification></latestModification>
    <citationNumber></citationNumber>
    <demoName>Demo</demoName>
    <action>
      <periodOfPerformance>
        <startDate>2008-05-13</startDate>
        <endDate>2010-01-31</endDate>
      </periodOfPerformance>
    </action>
  </typeAction>
</Form1921>
```

# cPet defines XML standard for CCDR data

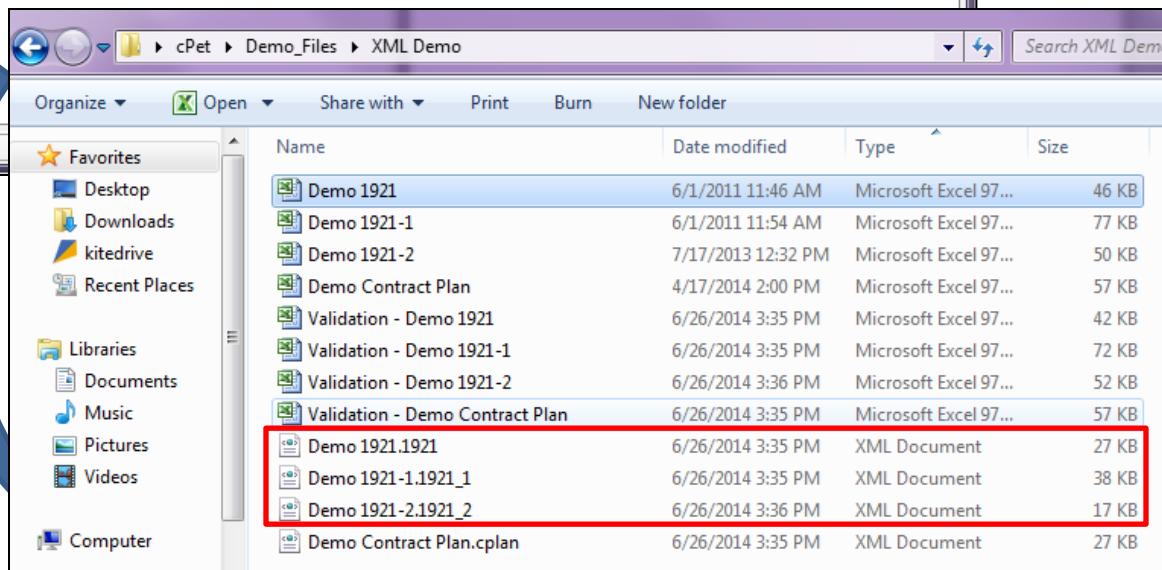


# cPet Desktop Conversion

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1. Import Excel version of the Contract Plan, then the Excel 1921, 1921-1, and 1921-2, or Excel Flat File.

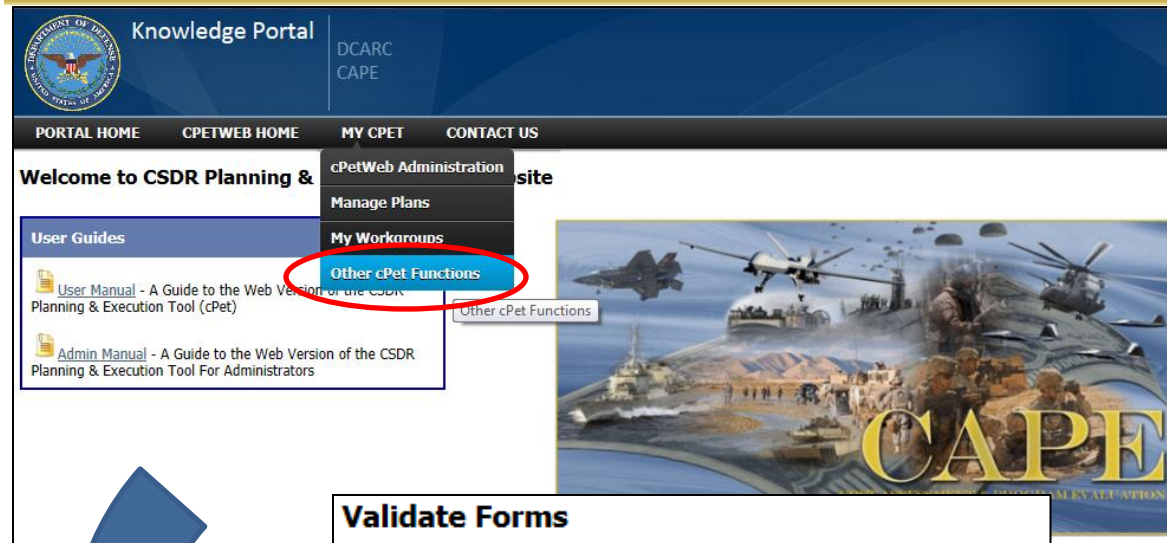


2. cPet automatically creates XML versions of the original Excel files in their source folder directory.



# cPet Web Conversion

OSD CAPE



1. Navigate to cPet Web, “MY CPET”, and “Other cPet Functions”.

**Validate Forms**

Functions

- ☒ Convert Files To XML
- ☐ Validate Cost Reports using uploaded Contract Plan
- ☐ Validate Cost Reports using existing Contract Plan from website
- ☐ Validate a 1921-3 file

Contract Plan

1921

1921-1

1921-2

1921-3

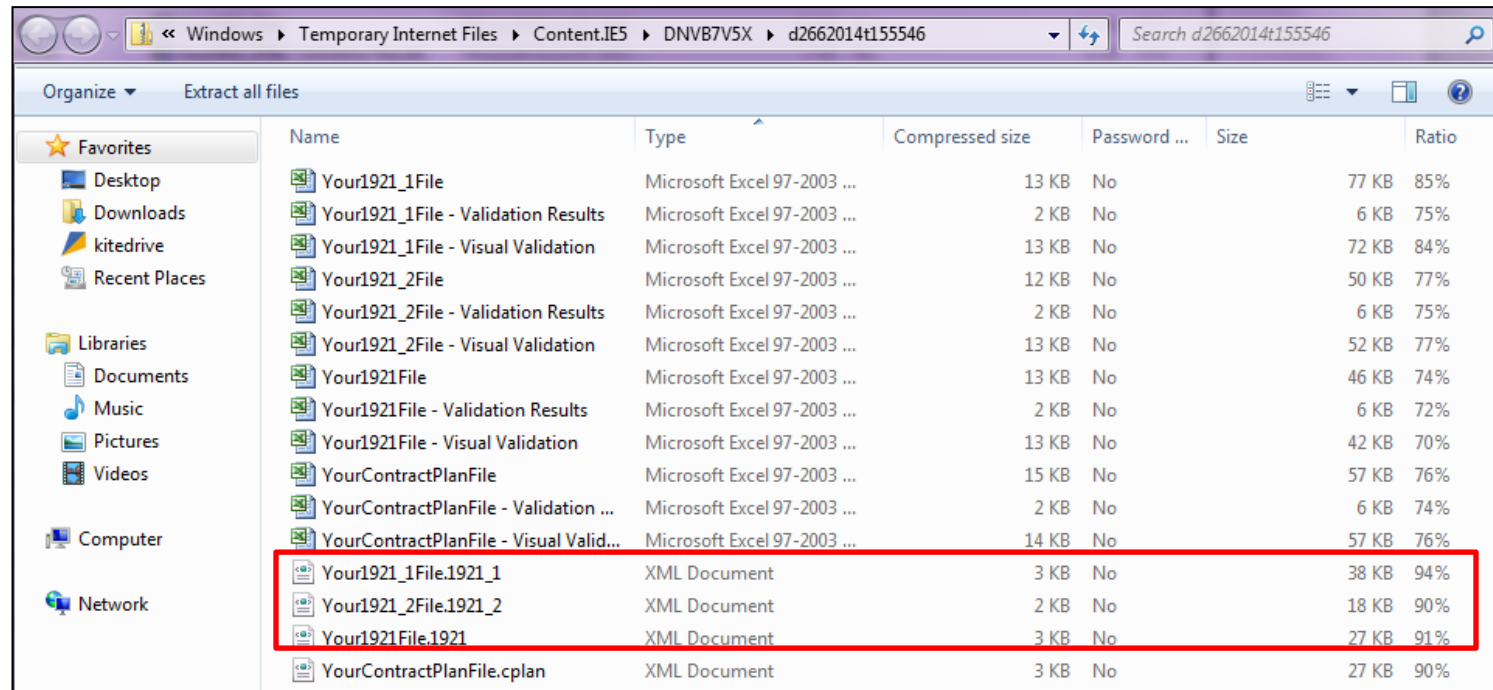
Flat File (xls only)

2. Browse and select the Excel Contract Plan, 1921, 1921-1, and 1921-2 reports. Then click “Convert”.



# cPet Web Conversion, cont.

OSD CAPE



3. You will be prompted to “Open” a folder containing the original Excel files, as well as the converted XML files.



## OSD CAPE

Cells highlighted in GREEN verify that the Excel data was transferred correctly to XML, and the data will be readable in XML format.

		Exam Operator	
<p>Using data services, performing and maintaining data research, and computing and examining information in order to determine the cause of system performance problems and/or system downtime. Research and analyze system logs, error messages, and other data to identify the root cause of the problem. Document findings and recommend solutions.</p> <p><b>ONLY ONE USER CAN ENTER NUMBER. PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE</b></p>			
<p><b>1. NAME/ADDRESS (Include Zip Code)</b></p> <p><b>1.1 PERFORMING ORGANIZATION</b>          Name/Company, Organization, 685 Ten Mile New York, NY          00999</p>		<p><b>1.2 COUNTRY</b></p> <p><b>1.3 PHONE</b>          ORDER/DELIVERY          NUMBER</p>	
<p><b>2.1 SOLICITATION NUMBER</b></p>		<p><b>2.2 REPORT # OF (Y/N)</b></p>	
<p><b>3. NUMBER</b></p>		<p><b>4. REPORT # OF (Y/N)</b></p>	
<p><b>5. EMAIL ADDRESS</b></p>		<p><b>6. DATE PREPARED (Y/N)</b></p>	
<p><b>7. APPROPRIATION</b></p> <p><b>7.1 PROCUREMENT</b></p>		<p><b>7.2 FUNDING</b></p>	
<p><b>8. COSTS AND HOURS INCURRED AT COMPLETION</b></p>		<p><b>9. COMMENTS</b></p>	
<p><b>8.1 TOTAL</b></p>		<p><b>8.2 NONPROCUREMENT</b></p>	
<p><b>8.3 RECURRING</b></p>		<p><b>8.4 FUNDING</b></p>	
<p><b>8.5 TOTAL</b></p>		<p><b>8.6 FUNDING</b></p>	

PROGRESS CURVE REPORT										Form Revison: (Date)	
<p>gaseous. Includes the use of telephone interviews, working meeting face to face, gathering and preparing the data, and completing and recording the results. Send comments and suggestions for improving the lead to, Department of Commerce, Washington Headquarters Building, Executive Secretariat Division (Rm 4000), Washington, DC 20540. For information of the lead, please do not use the above information for any other purpose.</p>											
1. PRIME MISSILE PRODUCT		2. CONTRACTOR TYPE		3. CONTRACT NO.		4. NAME/ADDRESS (Include ZIP Code)					
Demo PVP		PRIME ASSOCIATE		A9562-00-0-020		Demos Corporation, 456 East Blvd, New York, NY, 10005					
5. CUSTOMER (Direct Purchasing Subcontractor)		7. TYPE ACTION		8. CONTRACT NO.		9. SUBLOCATION:		10. DEMO			
		LATEST MODIFICATION				6. NAME:					
11. REPORT CYCLE		12. SUBMISSION NUMBER		13. RE SUBMISSION NUMBER		14. REPORT AS OF (YYYYMM)					
INTERIM		1		0		20000101					
15. DEPARTMENT		16. TELEPHONE NO. (Include Area Code)		17. E-MAIL ADDRESS		18. DATE PREPARED (YYYYMM)					
Business Operations		999-999-9999		af@afsystems.com		20000101					
19. UNITS/LOTS COMPLETED				20. APPROPRIATION							
A. LOT TOTAL				B. RETIRE							
C. LOT TOTAL				D. DISM							
A. COMPLETED UNITS/LOTS				B. WORK IN PROGRESS (WIP)				C. TOTAL DIRECT COSTS AND WORK INCURRED TO DATE			
A1		A2		A3		A4		B1		B2	
10		20		30		40		2.3		15.0	

[illegible]

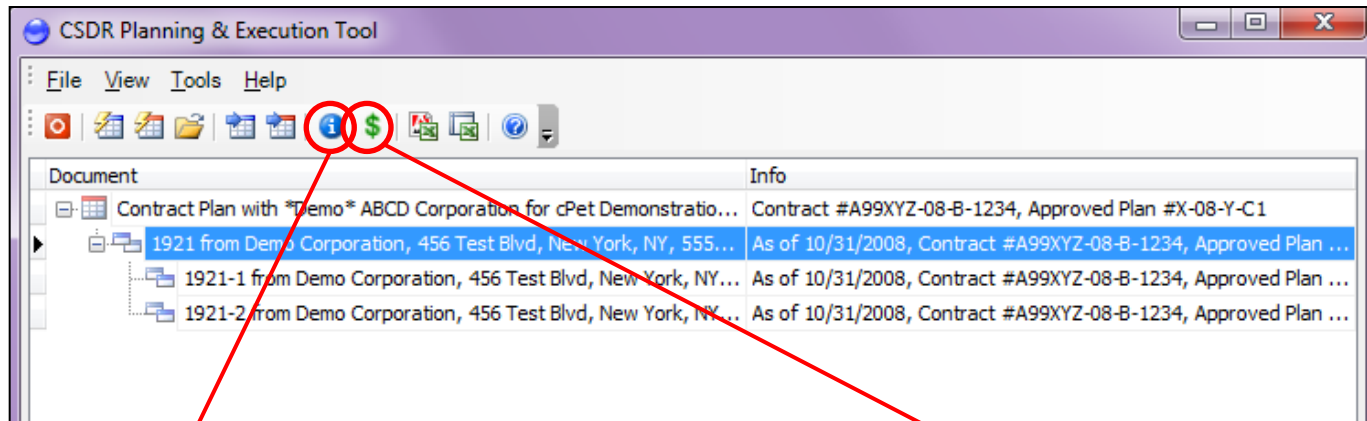




# Troubleshooting

OSD CAPE

If the “Visual Validation” files contain cells that are not highlighted in **GREEN**, the files can be corrected within cPet Desktop:



Edit and Save Header Information

Program Name: cPet Demonstration Space System (CDSS)

Phase: B

Prime Mission Product: Demo PMP

Report Cycle: Initial (selected)

Approved Plan Number: X-08-Y-C1

Submission Number: 1

Resubmission Number: 0

Report As Of: 10/31/2008

Point of Contact: Name: Tester, Fred A. Department: Business Operations E-Mail: cPetUser@demo.local Phone: 555-555-5555 Date Prepared: 12/1/2008

Edit and Save Cost Data

WBS Element Code	Reporting Element	# of Units	To Date			At Completion			
			Nonrecurring	Recurring	Total	# of Units	Nonrecurring	Recurring	Total
1.0	Space System	0.0	419,000.0	49,200.0	468,200.0	1.0/1.0	2,819,000.0	140,700.0	2,959,700.0
1.1	SEITPM and Other Common Ele...	0.0	25,000.0	25,000.0	50,000.0	1.0	125,000.0	29,000.0	154,000.0
1.2	Space Vehicle (1...n as required)	0.0	229,000.0	13,200.0	242,200.0	1.0	1,329,000.0	57,200.0	1,386,200.0
1.2.1	SEITPM and Other Common Ele...	0.0	24,000.0	5,000.0	29,000.0	1.0	124,000.0	9,000.0	133,000.0
1.2.2	Spacecraft Bus	0.0	22,000.0	2,500.0	24,500.0	1.0	222,000.0	10,500.0	232,500.0
1.2.2.1	Integration, Assembly, Test and C...	0.0	12,000.0	2,000.0	14,000.0	1.0	112,000.0	6,000.0	118,000.0
1.2.2.2	Telemetry, Tracking, and Commu...	0.0	10,000.0	500.0	10,500.0	1.0	110,000.0	4,500.0	114,500.0
1.2.3	Communication / Payload	0.0	24,000.0	0.0	24,000.0	1.0	424,000.0	16,000.0	440,000.0
1.2.3.1	Communication	0.0	17,000.0	0.0	17,000.0	1.0	217,000.0	8,000.0	225,000.0
1.2.3.1.1	UHF Antenna Subsystem	0.0	8,000.0	0.0	8,000.0	1.0	108,000.0	4,000.0	112,000.0
1.2.3.1.2	Ka Antenna Subsystem	0.0	9,000.0	0.0	9,000.0	1.0	109,000.0	4,000.0	113,000.0
1.2.3.2	Payload	0.0	7,000.0	0.0	7,000.0	1.0	207,000.0	8,000.0	215,000.0
1.2.3.2.1	Legacy Subsystem	0.0	3,000.0	0.0	3,000.0	1.0	103,000.0	4,000.0	107,000.0
1.2.3.2.2	Ka to UHF Subsystem	0.0	4,000.0	0.0	4,000.0	1.0	104,000.0	4,000.0	108,000.0
1.2.4	Booster Adapter	0.0	5,000.0	200.1	5,200.1	1.0	105,000.0	4,200.0	109,200.0
1.2.5	Space Vehicle Storage	0.0	4,000.0	500.0	4,500.0	1.0	104,000.0	4,500.0	108,500.0
1.2.6	Launch Systems Integration	0.0	50,000.0	2,000.0	52,000.0	1.0	150,000.0	6,000.0	156,000.0
1.2.7	Launch Operations & Mission Sup...	0.0	100,000.0	3,000.0	103,000.0	1.0	200,000.0	7,000.0	207,000.0
1.3	Ground (1...n as required)	0.0	128,000.0	7,000.0	135,000.0	1.0	1,128,000.0	47,000.0	1,175,000.0
1.3.1	SEITPM and Other Common Ele...	0.0	20,000.0	2,000.0	22,000.0	1.0	120,000.0	6,000.0	126,000.0
1.3.2	Ground Terminal Subsystems	0.0	13,000.0	0.0	13,000.0	1.0	113,000.0	4,000.0	117,000.0
1.3.3	Command and Control Subsystem	0.0	14,000.0	0.0	14,000.0	1.0	114,000.0	4,000.0	118,000.0